Forensic Biology Section

Specimen Numbering

1. Scope

1.1. Evidence items are numbered in a specific format to verify specimen identity, show the origin of subitems, and help maintain a chain of custody throughout all steps of analysis and storage.

1.2. The suffixes added to an evidence item number record the sequence in which evidentiary samples and controls are processed if multiple cuttings, extractions, or amplifications are performed.

1.3. Specimen numbers (and corresponding chain of custody) are created and stored in the JusticeTrax LIMS system when a sample is received and sub-itemed.

2. Safety

2.1. Treat all biological specimens as potentially infectious. Gloves and a laboratory coat must be worn at all times. Follow Universal Precautions.

3. Numbering Items

3.1. All storage containers, DNA extract tubes, and any other container that includes specimens or DNA must be labeled with the appropriate specimen number throughout all phases of analysis including extraction, amplification, and DNA profiling. Each time a sample is transferred to a new tube, the specimen number will be written on that tube.

3.2. If more than one STR kit is being amplified, the PCR amplification tubes should be labeled in a way that allows the tests being performed (e.g. Fusion versus Y23) to be differentiated.

4. Evidence Numbering

4.1. When a new case is created in JusticeTrax LIMS system, a **Case Number** is generated. Likewise, every specimen in a case will be assigned an **Item Number**. The **Specimen Number** is comprised of the Case Number and the Item Number. For example, with specimen number "L00-123-1": "L00-123" is the case number, and "1" is the item number.

4.2. An alphabetic suffix (upper case, lower case, or alternating between both) corresponds to a subitem (portion of an item, e.g. swabbing or cutting) being removed from that item and transferred to a new tube (e.g. L00-123-1**C**). The suffix "A" signifies the first subitem, "B" signifies the second subitem, and "C" signifies the third subitem. Subitem "1Ab" could represent a subitem taken from subitem 1A.

4.3. A "dot" and an alphabetic suffix corresponds to the extraction (e.g. L00-123-1C**.A**). The suffix ".A" signifies the first extraction, and ".B" signifies the second extraction.

4.4. A "dot" and a numeric suffix corresponds to an amplification (e.g. L00-123-1C.A**.1**) and counts the number of distinct amplifications an extract undergoes with a specific DNA profiling kit (e.g. Fusion versus Y23). If additional amplifications are performed with that same analytical system, the digit is increased sequentially (e.g. L00-123-1C.A**.2**). If

multiple aliquots of an extract are amplified simultaneously, then each reaction is given a different numeric suffix. Amplifications are work product, so they are NOT recorded in JusticeTrax.

5. Control Numbering:

5.1. Positive and Negative amplification controls are labeled as "POS" or "P", and "NEG" or "N," respectively. "POS" and "NEG" are preferred since analysis software can recognize these as controls and automatically check them against the expected profile.

5.2. The Reagent Blank (designated RB) is numbered sequentially with each set of extractions (e.g. RB1, RB2, RB3). Optionally, a Reagent Blank for known references can be designated as RBK, and a Reagent Blank for questioned items can be designated as RBQ.

5.3. Positive, Negative, and Reagent Blank controls are numbered sequentially with each set of amplifications (e.g. L00-123-RB1**.1**, L00-123-POS**.1** and L00-123-NEG**.1**), counting the number of amplifications an extract undergoes with each DNA profiling kit. Fusion and Y23 will each have separate numbering sequences (e.g. .1 and .2 in Fusion, and .1 and .2 in Y23).

5.4. Known standards from several cases can be extracted at the same time with a single reagent blank. In these instances, the reagent blank is labeled with a unique identifier (such as the date and scientist's initials) rather than the relevant case numbers (e.g. RBK_012520_dsm).

5.5. More than one case can be amplified at the same time with a single Positive and Negative control. In these instances, the amplification controls are labeled with a unique identifier (such as the date and scientist's initials) rather than the relevant case numbers (e.g. POS_013020_dsm and NEG_013020_dsm).